

07. Med-fi Prototype 2 & Usability Study

Team Mango - nurturEd
May 17, 2023

Team Mango

Homeschool Education



Nathan M.

CS, AI Coterm



Christina K.

Econ, HCI Coterm



Claire M.

CS, HCI Coterm



Grace Z.

CS, HCI Coterm

Overview

1. Initial Med-Fi Feedback
2. Redesign 1
3. Usability Study
4. Redesign 2
5. AI Applications

Initial Med-Fi Feedback

- Lesson Report: ChatGPT output overload
 - Too much text
 - Need sequential information design
- Lesson Report List Filter
 - Readability: color issue

Redesign 1

[Link to Figma](#)

Redesign 1

1. Lesson Report
2. AI Agent
3. Lesson Reports List Filter

Lesson Reports

Lesson Report

← Lesson Report

Photosynthesis


Student: Student 1

Instructor: Parent 1

Mon, 5/8/23

12:40 PM

43 min.

 In this lesson, Parent 1 taught Student 1 about photosynthesis. I have generated a report on how it went.


To start, you did a good job of...


Billy seemed to understand..., but he had multiple questions about... I recommend you review those topics.


I have a few suggestions on your instruction:





- Try to ask a few more question about Billy's understanding.

Do you have any questions about the report or the lesson?

What is a question I should've asked? 

 You could ask: "What is the name of the compound that makes plants green?"

Send a message 

Before

Lesson Report

← Lesson Report

Photosynthesis

Student: Student 1

Instructor: Parent 1

Mon, 5/8/23

12:40 PM

43 min.

Expand all


Collapse all





Summary ▼

What worked ▼

Suggestions ▼

Additional Resources ▼

Chat with AI assistant 

Lesson Report - Summary

← Lesson Report

Photosynthesis

Student: Student 1

Instructor: Parent 1

Mon, 5/8/23

12:40 PM

43 min.

Expand all

Collapse all


Summary ▲





In this lesson, Parent 1 taught Student 1 about photosynthesis. The topics covered were

- Plant parts
- Sunlight
- Carbon dioxide and water intake
- Chloroplasts
- Glucose

What worked ▼

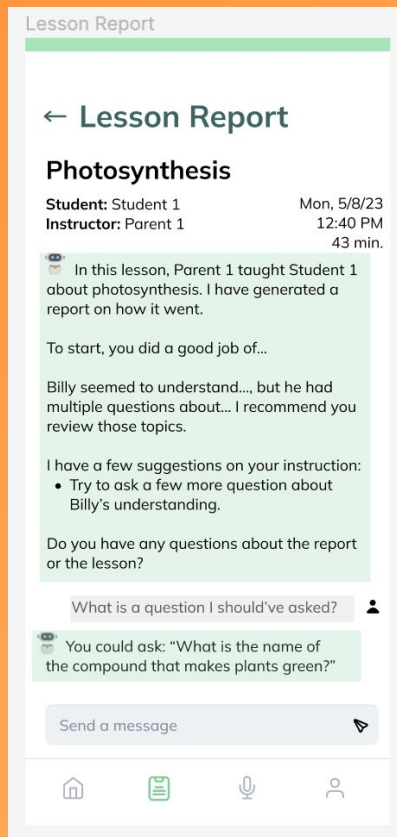
Suggestions ▼

Chat with AI assistant 

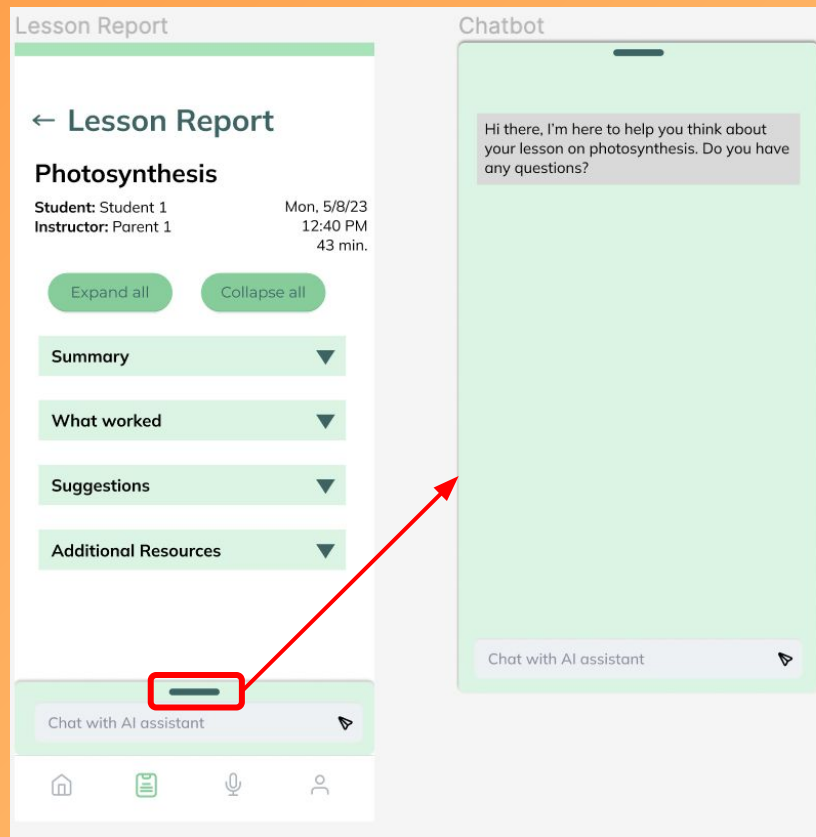
   

After

AI Agent



Before





After

Lesson Reports List Filter

Reports List - Filter Empty

Lesson Reports

Search  FILTER 

Filter Results

Student:

Student 1

Student 2

Instructor:

Parent 1

Parent 2

Subject:

Math

Science

English

Social Studies

Music

Reading

Cancel

Apply

Student 2

Parent 2

Spelling

Friday, May 05, 2023

Reading

Student 1

Student 2

Parent 1

Piano Scales

Thursday, May 04, 2023



Music

Student 2

Parent 2

Reports List - Filter Student

Lesson Reports

Search  FILTER 

Filter Results

Student:

Student 1

Student 2

Instructor:

Parent 1

Parent 2

Subject:

Math

Science

English

Social Studies

Music

Reading

Cancel

Apply

Student 2

Parent 2

Spelling

Friday, May 05, 2023

Reading

Student 1

Student 2

Parent 1

Piano Scales

Thursday, May 04, 2023


Music

Student 2

Parent 2

Before

Filter - 1

 **Filters** Clear

STUDENT

Charlie

Student 1

Leya

INSTRUCTOR

Randy

Leslie

SUBJECT

Math

Science

History


English

Music

Reading

Apply

Filter - 2

 **Filters** Clear

STUDENT

Charlie

Student 1

Leya

INSTRUCTOR

Randy

Leslie

SUBJECT

Math

Science

History

English

Music

Reading

Apply

After

Usability Study

Participants

Homeschooling
mother of 2

(Zoom)



Homeschooling
mother of 2

(Zoom)

Homeschooling
mother of 2

(Zoom)



Homeschooling
expert

(BlueJeans)

Study

Goals

- Test UI
- Test UX
- Test interest in functionality

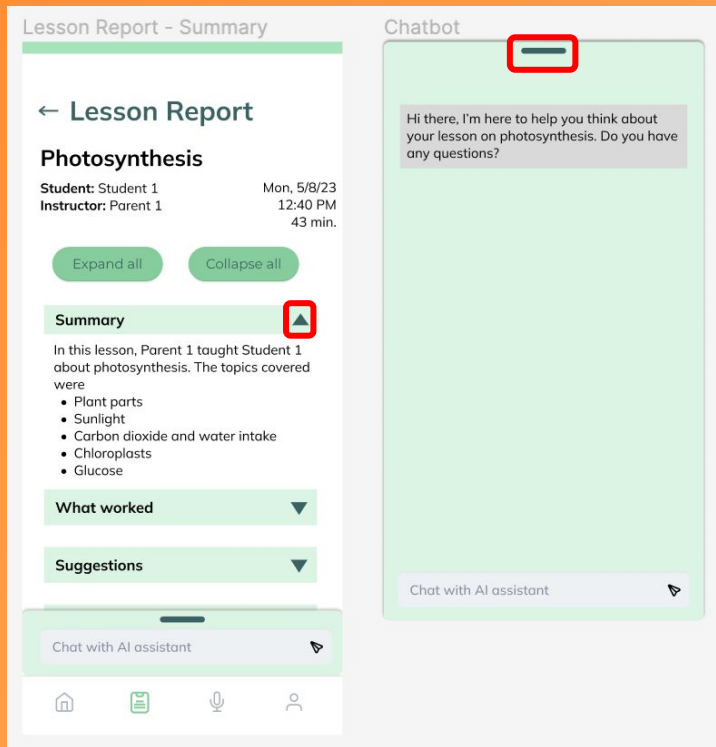
Tasks

- Explore tip of the day
- Record a lesson
- Open lesson report & interact with AI agent

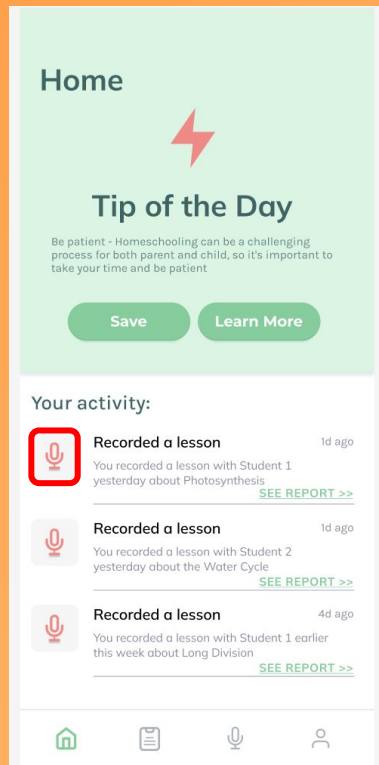
Results

1. User Interface
2. User Experience
3. Functionality

User Interface Results



Interactive elements too small



"I'm old, so the font is small." - P1



1. Font too small
2. Home page microphone confusing

User Experience Results

- Confusion about recording privacy
 - “Who gets to see this when it gets uploaded?”
- P2
 - 3 of 4 participants confused
- Wanted voice modality for AI agent
 - “Oh my gosh, I’ve got to write this out!” - P1

Functionality Results

- AI agent not easily accessible in reports
 - Need general chat
- Differentiate content and methodology suggestions
 - “If you think of [homeschooling] families [without external support], this is the perfect solution if you include methodology.” - P4

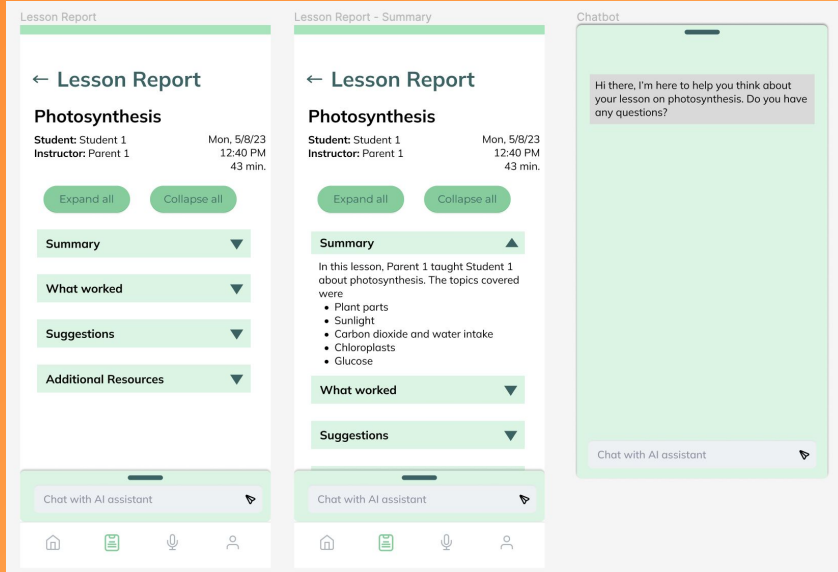
Redesign 2

[Link to Figma](#)

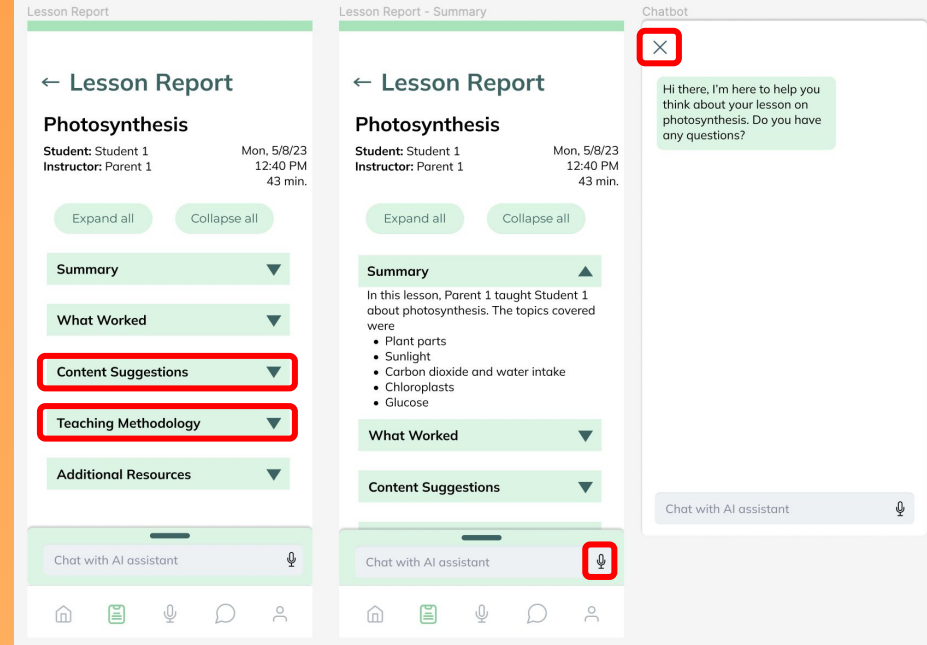
Redesign 2

1. Lesson Report
2. AI Agent
3. Lesson Reports List
4. Tip of the Day
5. Lesson Recording

Redesign 2: Lesson Report

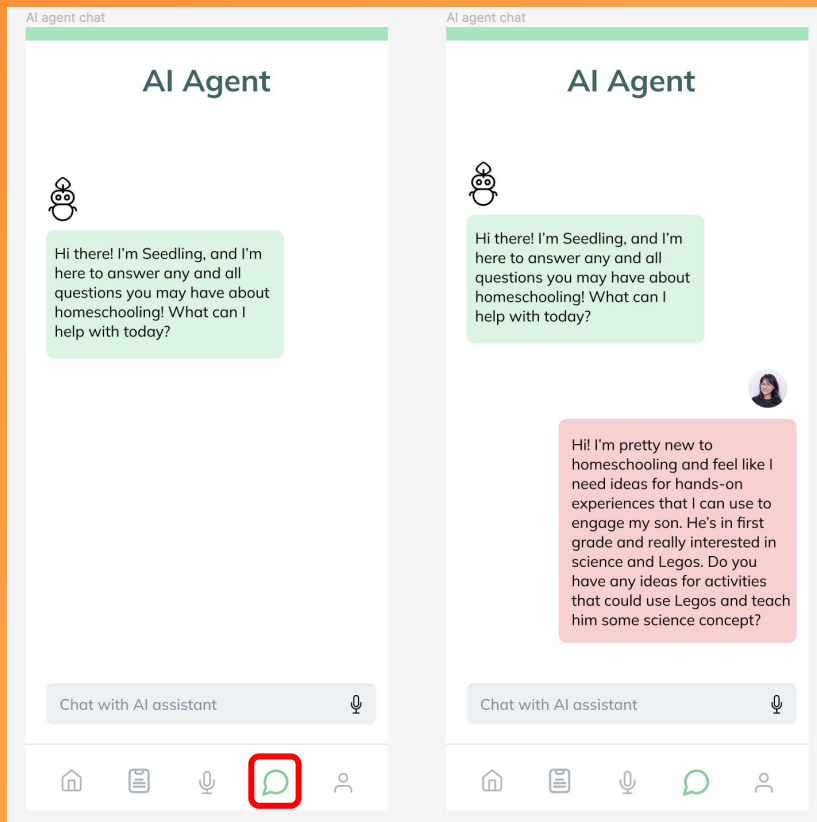


Before



After

Redesign 2: General AI Agent



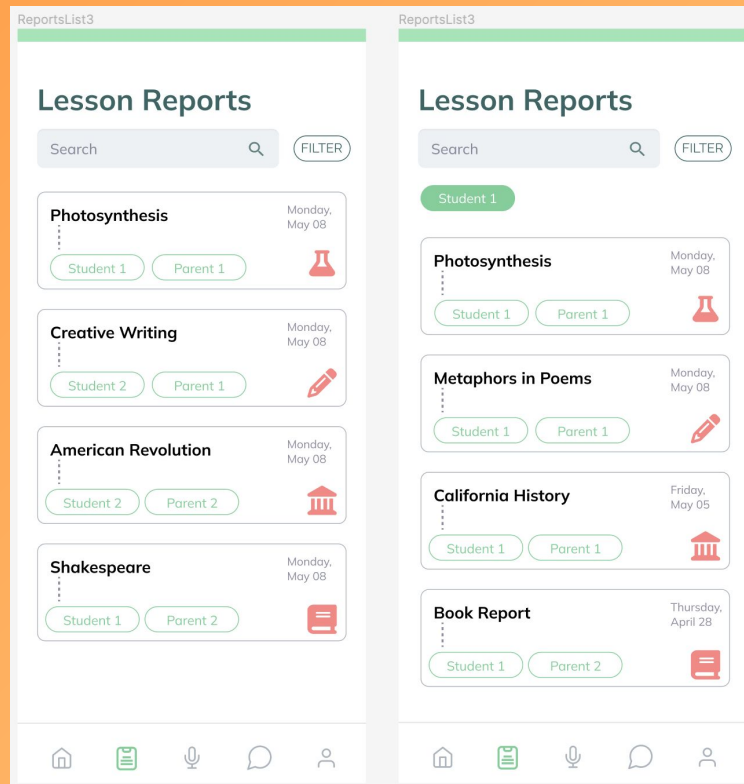
“You’re providing parents with the kind of expertise they would get when sitting down with an education expert.” - P4



Redesign 2: Lesson Reports List

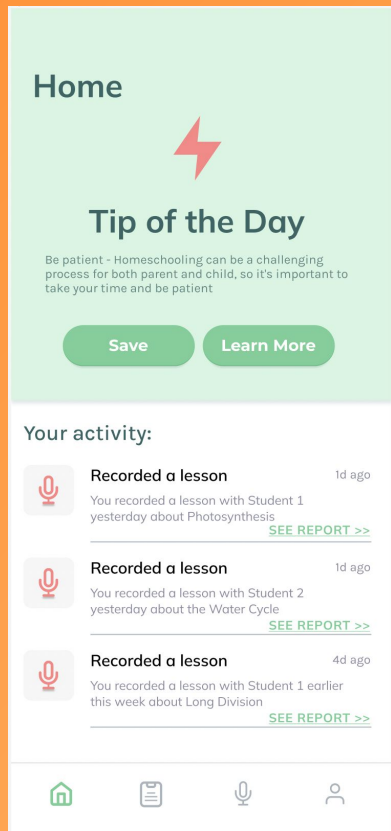


Before

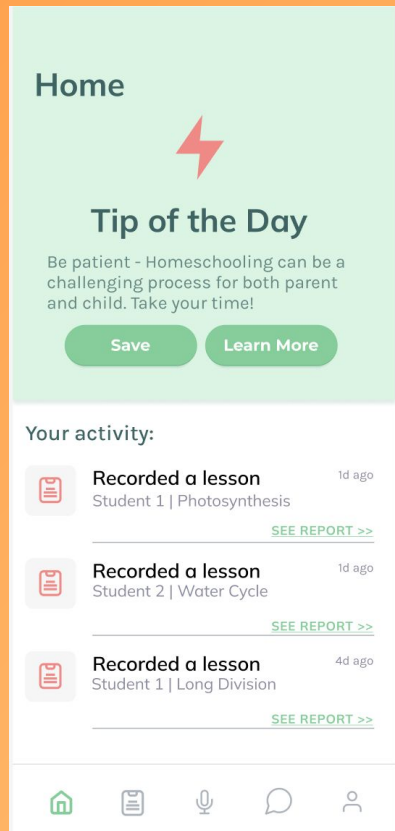


After

Redesign 2: Tip of the Day



Before



After

Redesign 2: Tip of the Day


← Tip of the Day

Be patient - Homeschooling can be a challenging process for both parent and child, so it's important to take your time and be patient

Your insights | Mon, May 8:

In your past 3/7 lessons, the ratio of time spent teaching vs engaging with the students and their questions has been 80:20.

SPEAKING



This graphic shows the number of questions asked per lesson in the past week.

⚡ Autonomy in learning





Research has shown that adolescents are 110% more likely to creatively develop their passions and explore their own interests and foster increased independence when they are given more autonomy in their learning. This leads to better learning outcomes.

[LEARN MORE >>](#)

⚡ Eliciting student engagement

When students are actively engaged in the learning process, they become more motivated, attentive, and involved, leading to improved retention and application of knowledge.


[LEARN MORE >>](#)



← Autonomy in learning

Autonomy in learning is essential as it empowers individuals to take control of their own educational journey.

By providing students with the freedom to make choices, set goals, and explore their interests, autonomy fosters intrinsic motivation, self-directed learning, and a sense of ownership, leading to deeper engagement, personal growth, and a greater sense of fulfillment in the learning process.







Insights in Action

- Ask for student feedback early and often
- Keep students in the loop during lesson planning
- Leave unstructured segments of planned lesson time

References

[MUSCAT, ET AL. PAPER 1](#)
[MARKS, ET AL. PAPER 1](#)
[KWAK, ET AL. PAPER 1](#)
[ZHANG, ET AL. PAPER 1](#)



Before

← Tip of the Day

Be patient - Homeschooling can be a challenging process for both parent and child, so it's important to take your time and be patient

Your insights | Mon, May 8:

Past 3/7 lessons
Time spent teaching vs
Time spent engaging 80:20.

SPEAKING



of questions/lesson

⚡ Autonomy in learning



Adolescents are 110% more likely to creatively develop their passions when they are given more autonomy in their learning.

[LEARN MORE >>](#)

⚡ Eliciting student engagement

When students are actively engaged, they are more motivated and involved, leading to improved retention and application of knowledge.

[LEARN MORE >>](#)



After

← Autonomy in learning

By providing students with the freedom to make choices, set goals, and explore their interests, autonomy fosters **intrinsic motivation, self-directed learning, and a sense of ownership**, leading to a greater sense of fulfillment in the learning process.





Insights in Action

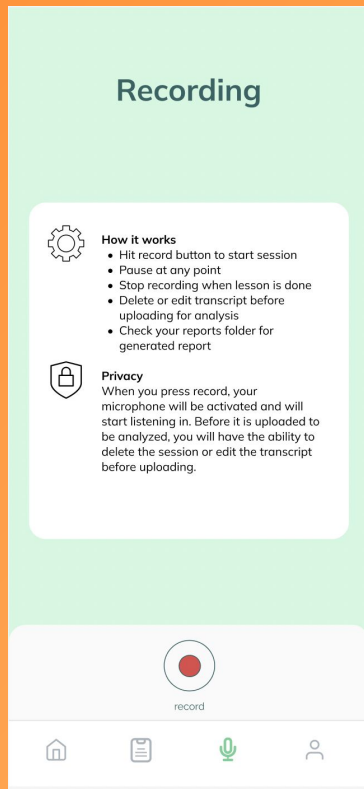
- Ask for student feedback early and often
- Keep students in the loop during lesson planning
- Leave unstructured segments of planned lesson time

References

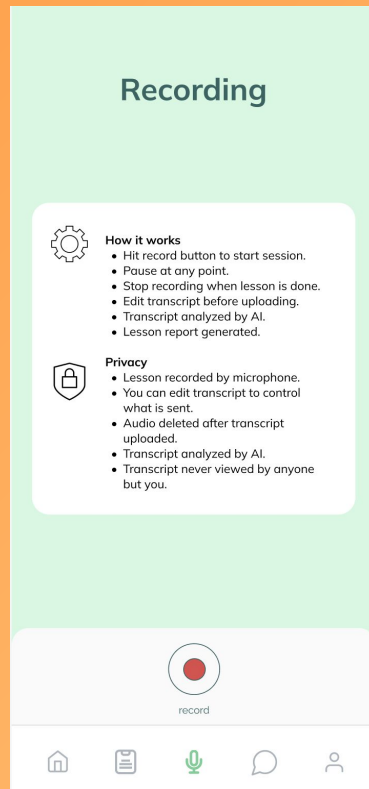
[MUSCAT, ET AL. PAPER 1](#)
[MARKS, ET AL. PAPER 1](#)
[KWAK, ET AL. PAPER 1](#)
[ZHANG, ET AL. PAPER 1](#)



Redesign 2: Lesson Recording



Before



After

AI Applications

AI Applications

- Lesson speech to text
- Generated lesson reports
 - Information sectioned by topic
- Interactive AI agent
 - Lesson-specific
 - General

Thank you!
Questions? Feedback?

Appendix

Link to Report

<https://docs.google.com/document/d/1lskvRsZR5QBc3FDfkF3DyniksQuoG1d73ZQel29CK3I/edit>